

Using X-ray and electron scattering techniques

For the past two years, I have had the opportunity to be the editor of a special topics section in *Powder Diffraction* that highlighted a field in X-ray characterization. These topics and the timing of publishing in June are intended to compliment a workshop at the Denver X-ray Conference held in August of each year. With the success of the special topics section, Ting Huang, *Powder Diffraction* Editor-in-Chief, approached me with another opportunity to help put together a special topics section for 2004. This time, the focus would be on microanalysis. One workshop covering microdiffraction and microfluorescence and another workshop covering microbeam X-ray stress analysis provided the focus for this year's special topics section.

Type the word *nanotechnology* into a popular internet search engine and you will get over 1,400,000 hits....*microelectronics* 847,000+ hits. Follow with a search on *microanalysis* and the response is over 3,200,000 hits. Little is big! Characterization of micro and nanomaterials is a critical component for the success of technologies relying on the properties of a few atoms. In this issue of *Powder Diffraction* you will find papers covering micro X-ray diffraction, micro X-ray fluorescence, microbeam X-ray stress analysis, and electron backscattered diffraction, all important in the understanding of micro and nanomaterials science.

I'd like to thank the authors who contributed the papers that comprise the special topics section. The schedule was tight for getting the papers written, reviewed, revised, and submitted on time to the publisher. I would also like to thank Ting Huang for giving me the chance to again work on a special topics publication, and Cathyann Colaiezzi, Managing Editor *Powder Diffraction*, for making sure everything was in place for this June publication. The result is a collection of excellent reference articles that will serve as an education tool for the analysis community.

Think small!

Tom Blanton
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